UNITED STATES PATENT AND TRADEMAKK UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.usplo.gov AUG 1 0 2007 CONFIRMATION NO. APPLICATION FIRST NAMED INVENTOR ATTORNEY DOCKET NO. 4966 10/722,576 11/28/2003 Thomas Happ 06/14/2007 7590 **EXAMINER** Thomas Happ MCLEAN MAYO, KIMBERLY N Kuhbachstr. 10 Munchen, ART UNIT PAPER NUMBER **GERMANY** 2187 MAIL DATE DELIVERY MODE 06/14/2007 **PAPER** 

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/722,576	HAPP ET AL.
Office Action Summary	Examiner	Art Unit
	Kimberly N. McLean-Mayo	2187
The MAILING DATE of this communication		1 - 1 - 1
Period for Reply	•	
A SHORTENED STATUTORY PERIOD FOR RE WHICHEVER IS LONGER, FROM THE MAILING  - Extensions of time may be available under the provisions of 37 CFF after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory per Failure to reply within the set or extended period for reply will, by stany reply received by the Office later than three months after the mearned patent term adjustment. See 37 CFR 1.704(b).	DATE OF THIS COMMUNICA R 1.136(a). In no event, however, may a reply riod will apply and will expire SIX (6) MONTHS atute, cause the application to become ABANI	TION. be timely filed from the mailing date of this communication. DONED (35 U.S.C. § 133).
Status		
1) Responsive to communication(s) filed on 2	8 February 2007.	
2a)⊠ This action is <b>FINAL</b> . 2b)☐ T	This action is non-final.	
3) Since this application is in condition for allo	wance except for formal matters	, prosecution as to the merits is
closed in accordance with the practice unde	er <i>Ex parte Quayle</i> , 1935 C.D. 1	1, 453 O.G. 213.
Disposition of Claims		
4)⊠ Claim(s) <u>1-16 and 18</u> is/are pending in the	application.	
4a) Of the above claim(s) is/are without	• •	
5) Claim(s) is/are allowed.		
6)⊠ Claim(s) <u>1-16 and 18</u> is/are rejected.		
7) Claim(s) is/are objected to.		
8) Claim(s) are subject to restriction an	d/or election requirement.	
Application Papers		
9) The specification is objected to by the Exam	niner	
10) The drawing(s) filed on is/are: a) a		the Examiner.
Applicant may not request that any objection to		
Replacement drawing sheet(s) including the con		• •
11)☐ The oath or declaration is objected to by the	Examiner. Note the attached O	ffice Action or form PTO-152.
Priority under 35 U.S.C. § 119		
12) ☐ Acknowledgment is made of a claim for fore	ign priority under 35 U.S.C. § 11	9(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:		
1. Certified copies of the priority docume		
2. Certified copies of the priority docume	• •	<del></del>
3. Copies of the certified copies of the p	· ·	ceived in this National Stage
application from the International Bur * See the attached detailed Office action for a	• • • • • • • • • • • • • • • • • • • •	raived .
occ the attached detailed Office action for a f	not of the certified copies flot fed	olvou.
Attachment(s)		
1) Notice of References Cited (PTO-892)	4) Interview Sumr	mary (PTO-413) ail Date
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08)	5) Notice of Inform	mal Patent Application
Paper No(s)/Mail Date	6) 🔲 Other:	

# **DETAILED ACTION**

1. The enclosed detailed action is in response to the Amendment submitted on February 28, 2007.

# Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 3. Claims 1-8, 11-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Sekiguchi (USPN: 5,901,911).

Regarding claims 1-2, 7-8, 11, 15-16 and 18, Sekiguchi discloses sending out a signal to select one of several modes for a PMC (programmable memory cell; the memory elements are configurable as volatile memory cells or nonvolatile memory cells and thus they are programmable memory cells) memory component (Abstract); operating the memory component in accordance with the specific mode selected by the signal, wherein depending on the specific mode selected, a PMC memory cell of the PMC memory component is brought into states of different storage permanence by correspondingly selecting a height of a current intensity of a programming pulse applied to the PMC memory cell (Abstract).

Regarding claims 3 and 12, Sekiguchi discloses a soft writing mode (volatile memory operation mode).

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Regarding claims 4-5 and 13-14, Sekiguchi discloses a hard writing mode (non-volatile memory

operation mode).

Regarding claim 6, Sekiguchi discloses writing data into the memory component, a current

intensity, a duration of a programming pulse is adapted and or a number of programming pulses

(Abstract).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sekiguchi

(USPN: 5,901,911).

Regarding claims 9-10, Sekiguchi does not disclose sending the select signal on the same data

lines as the data or using mode selection bits that are followed by bits carrying the data to be

stored. However, these concepts are well known in the art wherein control/address and data

signals are multiplexed on the same signal lines. This method reduces the overall number of

signals required to transmit information, thereby reducing delays in the system due to the natural

characteristics of a signal line such as impedance. Hence, it would have been obvious to one of

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ordinary skill in the art to incorporate such functionality in the system taught by Sekiguchi for the desirable purpose of improved performance afforded by delay reduction.

# Response to Arguments

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

# Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly N. McLean-Mayo whose telephone number is 571-272-4194. The examiner can normally be reached on Monday-Friday (10-6:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571-272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**KNM** 

June 9, 2007

# Notice of References Cited Application/Control No. | Applicant(s)/Patent Under Reexamination HAPP ET AL. Examiner | Art Unit | Page 1 of 1

# U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	Α	US-5,910,911	06-1999	Sekiguchi et al.	365/145
	В	US-	-		
	С	US-			
	D	US-		·	
	Е	US-	,		
	F	US-			
	G	US-			
	Н	US-			
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	J	US-			
	Κ	US-			
	L	US-			
	М	US-			

# FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	0					
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### **NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).) Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

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